



## SEQUENCE LISTING

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LEVIN, JEREMY IAN

<120> CRYSTALLINE TNF-a-CONVERTING ENZYME AND USES THEREOF

<130> 016761/0170

<140> 09/050,083  
<141> 1998-03-30

<150> 60/073,709  
<151> 1998-02-05

<160> 10

<170> PatentIn Ver. 3.2

<210> 1  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Illustrative  
peptide

<400> 1  
Pro Leu Ala Gln Ala Val Arg Ser Ser Ser  
1 5 10

<210> 2  
<211> 8  
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<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Illustrative  
peptide

<400> 2  
Gly Ser His His His His His His  
1 5

<210> 3  
<211> 11  
<212> PRT  
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<220>  
 <223> Description of Artificial Sequence: Illustrative  
 peptide

<220>  
 <221> MOD\_RES  
 <222> (3)..(4)  
 <223> variable amino acid

<220>  
 <221> MOD\_RES  
 <222> (6)..(7)  
 <223> variable amino acid

<220>  
 <221> MOD\_RES  
 <222> (9)..(10)  
 <223> variable amino acid

<400> 3  
 His Glu Xaa Xaa His Xaa Xaa Gly Xaa Xaa His  
       1                  5                  10

<210> 4  
 <211> 203  
 <212> PRT  
 <213> Crotalus adamanteus

<400> 4  
 Glu Gln Asn Leu Pro Gln Arg Tyr Ile Glu Leu Val Val Val Ala Asp  
       1                  5                  10                  15  
 Arg Arg Val Phe Met Lys Tyr Asn Ser Asp Leu Asn Ile Ile Arg Thr  
               20                  25                  30  
 Arg Val His Glu Ile Val Asn Ile Ile Asn Glu Phe Tyr Arg Ser Leu  
               35                  40                  45  
 Asn Ile Arg Val Ser Leu Thr Asp Leu Glu Ile Trp Ser Gly Gln Asp  
       50                  55                  60  
 Phe Ile Thr Ile Gln Ser Ser Ser Asn Thr Leu Asn Ser Phe Gly  
       65                  70                  75                  80  
 Glu Trp Arg Glu Arg Val Leu Leu Thr Arg Lys Arg His Asp Asn Ala  
               85                  90                  95  
 Gln Leu Leu Thr Ala Ile Asn Phe Glu Gly Lys Ile Ile Gly Lys Ala  
               100                  105                  110  
 Tyr Thr Ser Ser Met Cys Asn Pro Arg Ser Ser Val Gly Ile Val Lys  
           115                  120                  125  
 Asp His Ser Pro Ile Asn Leu Leu Val Ala Val Thr Met Ala His Glu  
       130                  135                  140

Leu Gly His Asn Leu Gly Met Glu His Asp Gly Lys Asp Cys Leu Arg  
145 150 155 160

Gly Ala Ser Leu Cys Ile Met Arg Pro Gly Leu Thr Pro Gly Arg Ser  
165 170 175

Tyr Glu Phe Ser Asp Asp Ser Met Gly Tyr Tyr Gln Lys Phe Leu Asn  
180 185 190

Gln Tyr Lys Pro Gln Cys Ile Leu Asn Lys Pro  
195 200

<210> 5

<211> 287

<212> PRT

<213> Homo sapiens

<400> 5

Pro Glu Glu Leu Val His Arg Val Lys Arg Arg Ala Asp Pro Asp Pro  
1 5 10 15

Met Lys Asn Thr Cys Lys Leu Leu Val Val Ala Asp His Arg Phe Tyr  
20 25 30

Arg Tyr Met Gly Arg Gly Glu Glu Ser Thr Thr Thr Asn Tyr Leu Ile  
35 40 45

Glu Leu Ile Asp Arg Val Asp Asp Ile Tyr Arg Asn Thr Ser Trp Asp  
50 55 60

Asn Ala Gly Phe Lys Gly Tyr Gly Ile Gln Ile Glu Gln Ile Arg Ile  
65 70 75 80

Leu Lys Ser Pro Gln Glu Val Lys Pro Gly Glu Lys His Tyr Asn Met  
85 90 95

Ala Lys Ser Tyr Pro Asn Glu Glu Lys Asp Ala Trp Asp Val Lys Met  
100 105 110

Leu Leu Glu Gln Phe Ser Phe Asp Ile Ala Glu Glu Ala Ser Lys Val  
115 120 125

Cys Leu Ala His Leu Phe Thr Tyr Gln Asp Phe Asp Met Gly Thr Leu  
130 135 140

Gly Leu Ala Tyr Val Gly Ser Pro Arg Ala Asn Ser His Gly Gly Val  
145 150 155 160

Cys Pro Lys Ser Gly Ser Ser Gly Gly Ile Cys Glu Lys Ala Tyr Tyr  
165 170 175

Ser Pro Val Gly Lys Lys Asn Ser Lys Leu Tyr Ser Asp Gly Lys Lys  
180 185 190

Lys Glu Ala Asp Leu Val Thr Thr His Glu Leu Gly His Asn Phe Gly  
195 200 205

Ala Glu His Asp Pro Asp Gly Leu Ala Glu Cys Ala Pro Asn Glu Asp  
 210 215 220

Gln Gly Gly Lys Tyr Val Met Tyr Pro Ile Ala Val Ser Gly Asp His  
 225 230 235 240

Glu Asn Asn Lys Met Phe Ser Asn Cys Ser Lys Gln Ser Ile Tyr Lys  
 245 250 255

Thr Ile Glu Ser Lys Ala Gln Glu Cys Phe Gln Glu Arg Ser Asn Lys  
 260 265 270

Val Cys Gly Asn Ser Arg Val Asp Glu Gly Glu Glu Cys Asp Pro  
 275 280 285

<210> 6  
 <211> 276  
 <212> PRT  
 <213> Homo sapiens

<400> 6  
 Gln Glu Lys His Ala Ile Asn Gly Pro Glu Leu Leu Arg Lys Arg Arg  
 1 5 10 15

Thr Thr Ser Ala Glu Lys Asn Thr Cys Gln Leu Tyr Ile Gln Thr Asp  
 20 25 30

His Leu Phe Phe Lys Tyr Tyr Gly Thr Arg Glu Ala Val Ile Ala Gln  
 35 40 45

Ile Ser Ser His Val Lys Ala Ile Asp Thr Ile Tyr Gln Thr Thr Asp  
 50 55 60

Phe Ser Gly Ile Arg Asn Ile Ser Phe Met Val Lys Arg Ile Arg Ile  
 65 70 75 80

Asn Thr Thr Ala Asp Glu Lys Asp Pro Thr Asn Pro Phe Arg Phe Pro  
 85 90 95

Asn Ile Ser Val Glu Lys Phe Leu Glu Leu Asn Ser Glu Gln Asn His  
 100 105 110

Asp Asp Tyr Cys Leu Ala Tyr Val Phe Thr Asp Arg Asp Phe Asp Asp  
 115 120 125

Gly Val Leu Gly Leu Ala Trp Val Gly Ala Pro Ile Tyr Leu Asn Ser  
 130 135 140

Gly Leu Thr Ser Thr Ser Leu Asn Thr Gly Ile Ile Thr Val Lys Asn  
 145 150 155 160

Tyr Gly Lys Thr Ile Leu Thr Lys Gln Asn Tyr Gly Ser His Val Pro  
 165 170 175

Pro Lys Val Ser His Ile Thr Phe Ala His Glu Val Gly His Asn Phe  
 180 185 190

Gly Ser Pro His Asp Ser Gly Thr Glu Cys Thr Pro Gly Glu Ser Lys  
 195 200 205  
 Asn Leu Gly Gln Lys Glu Asn Gly Asn Tyr Ile Met Tyr Ala Arg Ala  
 210 215 220  
 Thr Ser Gly Asp Lys Leu Asn Asn Asn Lys Phe Ser Leu Cys Ser Ile  
 225 230 235 240  
 Arg Asn Ile Ser Gln Val Leu Glu Lys Lys Arg Asn Asn Cys Phe Val  
 245 250 255  
 Glu Ser Gly Gln Pro Ile Cys Gly Asn Gly Met Val Glu Gln Gly Glu  
 260 265 270  
 Glu Cys Asp Cys  
 275

<210> 7  
 <211> 824  
 <212> PRT  
 <213> Homo sapiens

<400> 7  
 Met Arg Gln Ser Leu Leu Phe Leu Thr Ser Val Val Pro Phe Val Leu  
 1 5 10 15  
 Ala Pro Arg Pro Pro Asp Asp Pro Gly Phe Gly Pro His Gln Arg Leu  
 20 25 30  
 Glu Lys Leu Asp Ser Leu Leu Ser Asp Tyr Asp Ile Leu Ser Leu Ser  
 35 40 45  
 Asn Ile Gln Gln His Ser Val Arg Lys Arg Asp Leu Gln Thr Ser Thr  
 50 55 60  
 His Val Glu Thr Leu Leu Thr Phe Ser Ala Leu Lys Arg His Phe Lys  
 65 70 75 80  
 Leu Tyr Leu Thr Ser Ser Thr Glu Arg Phe Ser Gln Asn Phe Lys Val  
 85 90 95  
 Val Val Val Asp Gly Lys Asn Glu Ser Glu Tyr Thr Val Lys Trp Gln  
 100 105 110  
 Asp Phe Phe Thr Gly His Val Val Gly Glu Pro Asp Ser Arg Val Leu  
 115 120 125  
 Ala His Ile Arg Asp Asp Asp Val Ile Ile Arg Ile Asn Thr Asp Gly  
 130 135 140  
 Ala Glu Tyr Asn Ile Glu Pro Leu Trp Arg Phe Val Asn Asp Thr Lys  
 145 150 155 160  
 Asp Lys Arg Met Leu Val Tyr Lys Ser Glu Asp Ile Lys Asn Val Ser  
 165 170 175

Arg	Leu	Gln	Ser	Pro	Lys	Val	Cys	Gly	Tyr	Leu	Lys	Val	Asp	Asn	Glu	
			180					185					190			
Glu	Leu	Leu	Pro	Lys	Gly	Leu	Val	Asp	Arg	Glu	Pro	Pro	Glu	Glu	Leu	
			195				200					205				
Val	His	Arg	Val	Lys	Arg	Arg	Ala	Asp	Pro	Asp	Pro	Met	Lys	Asn	Thr	
	210					215					220					
Cys	Lys	Leu	Leu	Val	Val	Ala	Asp	His	Arg	Phe	Tyr	Arg	Tyr	Met	Gly	
225					230					235					240	
Arg	Gly	Glu	Glu	Ser	Thr	Thr	Thr	Asn	Tyr	Leu	Ile	Glu	Leu	Ile	Asp	
				245					250					255		
Arg	Val	Asp	Asp	Ile	Tyr	Arg	Asn	Thr	Ser	Trp	Asp	Asn	Ala	Gly	Phe	
			260					265					270			
Lys	Gly	Tyr	Gly	Ile	Gln	Ile	Glu	Gln	Ile	Arg	Ile	Leu	Lys	Ser	Pro	
		275					280					285				
Gln	Glu	Val	Lys	Pro	Gly	Glu	Lys	His	Tyr	Asn	Met	Ala	Lys	Ser	Tyr	
	290					295					300					
Pro	Asn	Glu	Glu	Lys	Asp	Ala	Trp	Asp	Val	Lys	Met	Leu	Leu	Glu	Gln	
305					310					315					320	
Phe	Ser	Phe	Asp	Ile	Ala	Glu	Glu	Ala	Ser	Lys	Val	Cys	Leu	Ala	His	
				325					330					335		
Leu	Phe	Thr	Tyr	Gln	Asp	Phe	Asp	Met	Gly	Thr	Leu	Gly	Leu	Ala	Tyr	
			340					345					350			
Val	Gly	Ser	Pro	Arg	Ala	Asn	Ser	His	Gly	Gly	Val	Cys	Pro	Lys	Ala	
		355					360					365				
Tyr	Tyr	Ser	Pro	Val	Gly	Lys	Lys	Asn	Ile	Tyr	Leu	Asn	Ser	Gly	Leu	
	370					375					380					
Thr	Ser	Thr	Lys	Asn	Tyr	Gly	Lys	Thr	Ile	Leu	Thr	Lys	Glu	Ala	Asp	
385					390					395					400	
Leu	Val	Thr	Thr	His	Glu	Leu	Gly	His	Asn	Phe	Gly	Ala	Glu	His	Asp	
				405					410					415		
Pro	Asp	Gly	Leu	Ala	Glu	Cys	Ala	Pro	Asn	Glu	Asp	Gln	Gly	Gly	Lys	
			420					425					430			
Tyr	Val	Met	Tyr	Pro	Ile	Ala	Val	Ser	Gly	Asp	His	Glu	Asn	Asn	Lys	
		435					440					445				
Met	Phe	Ser	Asn	Cys	Ser	Lys	Gln	Ser	Ile	Tyr	Lys	Thr	Ile	Glu	Ser	
		450				455					460					
Lys	Ala	Gln	Glu	Cys	Phe	Gln	Glu	Arg	Ser	Asn	Lys	Val	Cys	Gly	Asn	
465					470					475					480	

Ser Arg Val Asp Glu Gly Glu Glu Cys Asp Pro Gly Ile Met Tyr Leu  
 485 490 495  
 Asn Asn Asp Thr Cys Cys Asn Ser Asp Cys Thr Leu Lys Glu Gly Val  
 500 505 510  
 Gln Cys Ser Asp Arg Asn Ser Pro Cys Cys Lys Asn Cys Gln Phe Glu  
 515 520 525  
 Thr Ala Gln Lys Lys Cys Gln Glu Ala Ile Asn Ala Thr Cys Lys Gly  
 530 535 540  
 Val Ser Tyr Cys Thr Gly Asn Ser Ser Glu Cys Pro Pro Pro Gly Asn  
 545 550 555 560  
 Ala Glu Asp Asp Thr Val Cys Leu Asp Leu Gly Lys Cys Lys Asp Gly  
 565 570 575  
 Lys Cys Ile Pro Phe Cys Glu Arg Glu Gln Gln Leu Glu Ser Cys Ala  
 580 585 590  
 Cys Asn Glu Thr Asp Asn Ser Cys Lys Val Cys Cys Arg Asp Leu Ser  
 595 600 605  
 Gly Arg Cys Val Pro Tyr Val Asp Ala Glu Gln Lys Asn Leu Phe Leu  
 610 615 620  
 Arg Lys Gly Lys Pro Cys Thr Val Gly Phe Cys Asp Met Asn Gly Lys  
 625 630 635 640  
 Cys Glu Lys Arg Val Gln Asp Val Ile Glu Arg Phe Trp Asp Phe Ile  
 645 650 655  
 Asp Gln Leu Ser Ile Asn Thr Phe Gly Lys Phe Leu Ala Asp Asn Ile  
 660 665 670  
 Val Gly Ser Val Leu Val Phe Ser Leu Ile Phe Trp Ile Pro Phe Ser  
 675 680 685  
 Ile Leu Val His Cys Val Asp Lys Lys Leu Asp Lys Gln Tyr Glu Ser  
 690 695 700  
 Leu Ser Leu Phe His Pro Ser Asn Val Glu Met Leu Ser Ser Met Asp  
 705 710 715 720  
 Ser Ala Ser Val Arg Ile Ile Lys Pro Phe Pro Ala Pro Gln Thr Pro  
 725 730 735  
 Gly Arg Leu Gln Pro Ala Pro Val Ile Pro Ser Ala Pro Ala Ala Pro  
 740 745 750  
 Lys Leu Asp His Gln Arg Met Asp Thr Ile Gln Glu Asp Pro Ser Thr  
 755 760 765  
 Asp Ser His Met Asp Glu Asp Gly Phe Glu Lys Asp Pro Phe Pro Asn  
 770 775 780

Ser Ser Thr Ala Ala Lys Ser Phe Glu Asp Leu Thr Asp His Pro Val  
785 790 795 800

Thr Arg Ser Glu Lys Ala Ala Ser Phe Lys Leu Gln Arg Gln Asn Arg  
805 810 815

Val Asp Ser Lys Glu Thr Glu Cys  
820

<210> 8

<211> 477

<212> PRT

<213> Homo sapiens

<400> 8

Met Arg Gln Ser Leu Leu Phe Leu Thr Ser Val Val Pro Phe Val Leu  
1 5 10 15

Ala Pro Arg Pro Pro Asp Asp Pro Gly Phe Gly Pro His Gln Arg Leu  
20 25 30

Glu Lys Leu Asp Ser Leu Leu Ser Asp Tyr Asp Ile Leu Ser Leu Ser  
35 40 45

Asn Ile Gln Gln His Ser Val Arg Lys Arg Asp Leu Gln Thr Ser Thr  
50 55 60

His Val Glu Thr Leu Leu Thr Phe Ser Ala Leu Lys Arg His Phe Lys  
65 70 75 80

Leu Tyr Leu Thr Ser Ser Thr Glu Arg Phe Ser Gln Asn Phe Lys Val  
85 90 95

Val Val Val Asp Gly Lys Asn Glu Ser Glu Tyr Thr Val Lys Trp Gln  
100 105 110

Asp Phe Phe Thr Gly His Val Val Gly Glu Pro Asp Ser Arg Val Leu  
115 120 125

Ala His Ile Arg Asp Asp Asp Val Ile Ile Arg Ile Asn Thr Asp Gly  
130 135 140

Ala Glu Tyr Asn Ile Glu Pro Leu Trp Arg Phe Val Asn Asp Thr Lys  
145 150 155 160

Asp Lys Arg Met Leu Val Tyr Lys Ser Glu Asp Ile Lys Asn Val Ser  
165 170 175

Arg Leu Gln Ser Pro Lys Val Cys Gly Tyr Leu Lys Val Asp Asn Glu  
180 185 190

Glu Leu Leu Pro Lys Gly Leu Val Asp Arg Glu Pro Pro Glu Glu Leu  
195 200 205

Val His Arg Val Lys Arg Arg Ala Asp Pro Asp Pro Met Lys Asn Thr  
210 215 220



Cys	Lys	Leu	Leu	Val	Val	Ala	Asp	His	Arg	Phe	Tyr	Arg	Tyr	Met	Gly	225	230	235	240
Arg	Gly	Glu	Glu	Ser	Thr	Thr	Thr	Asn	Tyr	Leu	Ile	Glu	Leu	Ile	Asp	245	250	255	
Arg	Val	Asp	Asp	Ile	Tyr	Arg	Asn	Thr	Ser	Trp	Asp	Asn	Ala	Gly	Phe	260	265	270	
Lys	Gly	Tyr	Gly	Ile	Gln	Ile	Glu	Gln	Ile	Arg	Ile	Leu	Lys	Ser	Pro	275	280	285	
Gln	Glu	Val	Lys	Pro	Gly	Glu	Lys	His	Tyr	Asn	Met	Ala	Lys	Ser	Tyr	290	295	300	
Pro	Asn	Glu	Glu	Lys	Asp	Ala	Trp	Asp	Val	Lys	Met	Leu	Leu	Glu	Gln	305	310	315	320
Phe	Ser	Phe	Asp	Ile	Ala	Glu	Glu	Ala	Ser	Lys	Val	Cys	Leu	Ala	His	325	330	335	
Leu	Phe	Thr	Tyr	Gln	Asp	Phe	Asp	Met	Gly	Thr	Leu	Gly	Leu	Ala	Tyr	340	345	350	
Val	Gly	Ser	Pro	Arg	Ala	Asn	Ser	His	Gly	Gly	Val	Cys	Pro	Lys	Ala	355	360	365	
Tyr	Tyr	Ser	Pro	Val	Gly	Lys	Lys	Asn	Ile	Tyr	Leu	Asn	Ser	Gly	Leu	370	375	380	
Thr	Ser	Thr	Lys	Asn	Tyr	Gly	Lys	Thr	Ile	Leu	Thr	Lys	Glu	Ala	Asp	385	390	395	400
Leu	Val	Thr	Thr	His	Glu	Leu	Gly	His	Asn	Phe	Gly	Ala	Glu	His	Asp	405	410	415	
Pro	Asp	Gly	Leu	Ala	Glu	Cys	Ala	Pro	Asn	Glu	Asp	Gln	Gly	Gly	Lys	420	425	430	
Tyr	Val	Met	Tyr	Pro	Ile	Ala	Val	Ser	Gly	Asp	His	Glu	Asn	Asn	Lys	435	440	445	
Met	Phe	Ser	Asn	Cys	Ser	Lys	Gln	Ser	Ile	Tyr	Lys	Thr	Ile	Glu	Ser	450	455	460	
Lys	Ala	Gln	Glu	Cys	Phe	Gln	Glu	Arg	Ser	Asn	Lys	Val				465	470	475	

&lt;210&gt; 9

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Illustrative peptide

&lt;400&gt; 9

Ser Pro Leu Ala Gln Ala Val Arg Ser Ser Ser Arg  
1 5 10

&lt;210&gt; 10

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Illustrative  
Met-turn located in SEQ ID NOS 5 & 6

&lt;400&gt; 10

Tyr Val Met Tyr  
1